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EXAMINER

TANG, KARIN C

ART UNIT

PAPER NUMBER

2451

MAIL DATE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/052,744

Applicant(s)

RAPP ET AL.

Examiner

KAREN C. TANG

Art Unit

2451

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-22 and 29-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-22, 29-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

- This action is responsive to the amendment and remarks file on 01/13/2010.
- Claims 2-22, 29-37 are presented for further examination.

DETAILED ACTION

Response to Arguments

Applicant's arguments filed 01/13/09 have been fully considered but they are not persuasive.

Applicant argues that Krivoshein did not explicitly disclosing “a signal database that manages communication between a hardware subsystem and an application service system and a self configuring interface system.

After carefully re-visit both Moyne and Krovoshein references, Examiner has remapped the references according to appropriate limitations based on applicant’s amendment:

Moyne discloses a signal database managing communication information (I/O Interpreter 25, Col 7, Lines 30-40) between the hardware subsystem and the self-configuring application services system via a plurality of a communication protocol (refer to Col 12, Lines 10-20);

a self-configuring interface system (Message Parser 24, refer to Col 12, Lines 20-25) coupled to the hardware subsystem and the application services system and comprising an interface system configuration module coupled to retrieve interface configuration information from the signal database and facilitate communication between the hardware subsystem and the self-configuring application services system via a plurality of communication protocol (refer to Col 12, Lines 20-35).

Although Moyne disclosed the invention substantially as claimed, Moyne did not explicitly disclosing regarding a signal database storing interface communication configuration information.

Krovoshein, in an analogous art disclosed a signal database storing interface communication configuration information (refer to Col 10, Lines 25-27, Col 21, Lines 24-61 and Col 22, Lines 20-34).

Therefore, arguments are not persuasive.

Dependent Claims are not allowable at least for the same reason described above with regards to independent Claims and by virtual of their respective dependencies upon independent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 29-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There are no supports within the specification stating that “the system determining a required communication protocol from a plurality of communication protocols and selecting communication protocol interface configuration information based on said determining”

Correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-22, 29-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Moyne (US 5,469,361) in view of Krivoshein et al hereinafter Krovoshein (US 5,980,078).

1. Referring to Claim 5, Moyne discloses a system (refer to Title) comprising:

a hardware subsystem (manufacturing equipment, refer to Col 4, Lines 27-67) that includes at least one component (equipment controllers 13a-13s) adapted to carry an electrical signal (commands, refer to Col 4, Lines 50-67) associated with one of a sensing operation and a control operation (refer to Col 5, Lines 25-55);

an application database (22, refer to Col 6, Lines 1-10) storing application service configuration information (refer to Col 8, Lines 60-67 and Col 9, Lines 50-67 and Col 11, Lines 40-55) that corresponds to a manner of processing information associated with the electrical signal (message, refer to Col 6, lines 1-5); and

a self configuring application services system (refer to Col 5, Lines 15-25) comprising an application system configuration module (Main program module 21, refer to Col 7, Lines 60-67) coupled to the hardware subsystem (manufacturing equipment, refer to Col 4, Lines 27-67) and coupled to retrieve application service configuration information from the application database (refer to Col 8, Lines 1-15), the self-configuring application service system operable itself for communication with the hardware subsystem using the application service configuration information, this configuration including associating an event code with the electrical signal (refer to Col 5, Lines 55-67, Col 6, Lines 1-17, 29-40 and Col 17, Lines 50-67, when receiving messages/stimuli, then the application service system will invoke a proper sequence such as determined type of routine to call as an result of the unique action to take. The routines are the event code, and the stimulus and routine calls are the electronic signals).

a signal database managing communication information (I/O Interpreter 25, Col 7, Lines 30-40) between the hardware subsystem and the self-configuring application services system via a plurality of a communication protocol (refer to Col 12, Lines 10-20);

a self-configuring interface system (Message Parser 24, refer to Col 12, Lines 20-25) coupled to the hardware subsystem and the application services system and comprising an interface system configuration module coupled to retrieve interface configuration information from the signal database and facilitate communication between the hardware subsystem and the self-configuring application services system via a plurality of communication protocol (refer to Col 12, Lines 20-35).

Although Moyne disclosed the invention substantially as claimed, Moyne did not explicitly disclosing regarding a signal database storing interface communication configuration information.

Krovoshein, in an analogous art disclosed a signal database storing interface communication configuration information (refer to Col 10, Lines 25-27, Col 21, Lines 24-61 and Col 22, Lines 20-34).

It would have been obvious for one of ordinary skill in the art to combine the teaching of Moyne with Krovoshein because Krovoshein's teaching of " a signal database storing interface communication configuration information" would improve Moyne's system by it provides the ability to support automatic sensing of devices to the users in the system.

2. Referring to Claim 2, Moyne discloses the application service configuration information references a software object for processing information associated with the electrical signal, and the self-configuring application service system further comprises the software object (refer to Col 13, Lines 10-67 and Col 14, Lines 1-50)

3. Referring to Claim 3, Moyne discloses the object database storing a version of the software object (database stores the newest updated parameters/object, refer to Col 14, Lines 8-50).

4. Referring to Claim 4, Moyne discloses wherein the object database forms a portion of an Object Database Management System (refer to Col 13, Lines 45-55)

5. Referring to Claim 6, Moyne discloses wherein said interface configuration information further references a software object that corresponds to a manner of processing information associated with the electrical signal (information that parsed from the message which can called up the software routine that can configure the controller, refer to Col 5, Lines 15-67 and Col 6, Lines 1-67).
6. Referring to Claim 7, Moyne discloses wherein the self-configuring interface system further comprises the software object (refer to Col 3, Lines 1-15).
7. Referring to Claim 8, Moyne discloses wherein an object database storing a version of the software object (database stores the newest updated parameters/object, refer to Col 14, Lines 8-50).
8. Referring to Claim 9, Moyne discloses wherein the object database forms a portion of an Object Database Management System (refer to Col 13, Lines 45-55)
9. Referring to Claim 10, Moyne discloses wherein the self-configuring nterface system communications with the hardware subsystem in accordance with the electrical signal, and communications with the appliance services system in accordance with an event code that corresponds to the electrical signal (refer Col 5, Lines 64-Col 6, Lines 15, and Col 6, Lines 55-61 and Col 7, Lines 65 and Col 8, Lines 8).

10. Referring to Claim 11, Moyne discloses wherein the interface system communicates with the hardware subsystem in accordance with the electrical signal, and communicates with the software object and the application service system in accordance with the event code that corresponds to the electrical signal (refer to Col 5, Lines 64- Col 6, Lines 55-61, Col 7, Lines 65 to Col 8, Lines 8, and Col 5, Lines 25-55).

11. Referring to Claim 12, Moyne discloses
a hardware subsystem (manufacturing equipment, refer to Col 4, Lines 27-67) that includes a set of components adapted to carry electrical signal (commands, refer to Col 4, Lines 50-67), each electrical signal associated with one from the group of a sensing operation and a control operation (refer to Col 5, Lines 25-55);
an application database (22, refer to Col 6, Lines 1-10) referencing a first software object (Message, refer to Col 15, Lines 60-67) that corresponds to a manner of processing information associated with an electrical signal (message, refer to Col 6, lines 1-5, and Col 14, Lines 50-67 and Col 15);
a self-configuring application services system (refer to Col 5, Lines 15-25) comprising:
application service system configuration module (Main program module 21, refer to Col 7, Lines 60-67) coupled to the hardware subsystem (manufacturing equipment, refer to Col 4, Lines 27-67) and coupled to retrieve application service configuration information from the application database (refer to Col 8, Lines 1-15); and
the first software object (Message, refer to Col 15, Lines 60-67);

a signal database managing communication information (I/O Interpreter 25, Col 7, Lines 30-40) between the hardware subsystem and the self-configuring application services system via a plurality of a communication protocol (refer to Col 12, Lines 10-20) and referencing a second software object (refer to Col 12, Lines 10-30) that corresponds to a manner of processing information associated with an electrical signal and associates an event code with the electrical signal

a self-configuring interface system (Message Parser 24, refer to Col 12, Lines 20-25) coupled to the hardware subsystem and the application services system and comprising an interface system configuration module coupled to retrieve interface configuration information from the signal database and facilitate communication between the hardware subsystem and the self-configuring application services system via a plurality of communication protocol and the second software object (refer to Col 12, Lines 20-35).

Although Moyne disclosed the invention substantially as claimed, Moyne did not explicitly disclosing regarding a signal database storing interface communication configuration information.

Krovoshein, in an analogous art disclosed a signal database storing interface communication configuration information (refer to Col 10, Lines 25-27, Col 21, Lines 24-61 and Col 22, Lines 20-34).

It would have been obvious for one of ordinary skill in the art to combine the teaching of Moyne with Krovoshein because Krovoshein's teaching of "a signal database storing interface communication configuration information" would improve Moyne's system by it provides the ability to support automatic sensing of devices to the users in the system.

12. Referring to Claim 13, Moyne discloses comprising an object database (database 22, refer to Col 13, Lines 40-50, Col 8, Lines 15-67, and Col 16, Lines 1-15) storing one from the group of the first software object (Entity, Message, refer to Col 15, Lines 65-67) and the second software object (Entity, Invocation, refer to Col 15, Lines 65-67).

13. Referring to Claim 14, Moyne discloses wherein the object database forms a portion of an Object Database Management System (refer to Col 13, Lines 45-55)

14. Referring to Claim 15, Moyne discloses the network coupled to the self-configuring application service system and the self-configuring interface system (refer to Col 4, Lines 25-55 and Col 3, Lines 1-15, and Col 5, Lines 35-55).

15. Referring to Claim 16, Moyne discloses wherein the network comprises one from the group of a Local Area Network, a Wide Area network, and the Internet (Local area network, refer to Col 4, Lines 65-67)

16. Referring to Claim 17, Moyne discloses wherein the self-configuring interface system communications with the hardware subsystem in accordance with the electrical signal, and communications with the self-configuring appliance services system in accordance with an event code that corresponds to the electrical signal (refer Fig 2, Col 5, Lines 64-Col 6, Lines 15, and Col 6, Lines 55-61 and Col 7, Lines 65 and Col 8, Lines 8).

17. Referring to Claim 18, Moyne discloses wherein the self-configuring interface system communicates with the hardware subsystem in accordance with the electrical signal, and communicates with the software object and the self-configuring application service system in accordance with an event code that corresponds to the electrical signal (refer to Col 5, Lines 64-Col 6, Lines 55-61, Col 7, Lines 65 to Col 8, Lines 8, and Col 5, Lines 25-55).

18. Referring to Claim 19, Moyne discloses wherein the self-configuring interface system further comprises:
a signal exchange module coupled to the hardware subsystem, the signal exchange module comprising a storage element for storing a hardware signal corresponding to an electrical signal (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines 55-61, and Col 7, Lines 65 - Col 8, Lines 8);

19. Referring to Claim 20, Moyne discloses wherein the self-configuring interface system further comprises:
a signal exchange module coupled to the hardware subsystem, the signal exchange module comprising a storage element for storing a hardware signal corresponding to an electrical signal;
an event coding-decoding module coupled to map between an electrical signal and an event code (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines 55-61, and Col 7, Lines 65 - Col 8, Lines 8).

20. Referring to Claim 21, Moyne discloses wherein the self-configuring interface system further comprises:

a signal exchange module coupled to the hardware subsystem, the signal exchange module comprising a storage element for storing a hardware signal corresponding to an electrical signal; an event coding-decoding module coupled to map between an electrical signal and an event code (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines 55-61, and Col 7, Lines 65 - Col 8, Lines 8);

an inter-process communication module coupled to manage event-based communication with the self-configuring application services system (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines 55-61, and Col 7, Lines 65 - Col 8, Lines 8).

19. Referring to Claim 22, Moyne discloses wherein the self-configuring interface system further comprises:

a signal exchange module coupled to the hardware subsystem, the signal exchange module comprising a storage element for storing a hardware signal corresponding to an electrical signal; an event coding-decoding module coupled to map between an electrical signal and an event code; and

an interprocess communication module coupled to manage event-based communication with the self-configuring application services system and the second software object (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines 55-61, and Col 7, Lines 65 - Col 8, Lines 8, Examiner interprets the second software object as “Innovation” entity, refer to Col 15, Lines 65-67).

21. Referring to Claim 29, Moyne discloses a system (refer to Title) comprising a hardware subsystem (manufacturing equipment, refer to Col 4, Lines 27-67) that includes a set of components adapted to carry electrical signals (commands, refer to Col 4, Lines 50-67), each electrical signal associated with one from the group of a sensing operation and a control operation (refer to Col 5, Lines 25-55), a method for processing an electrical signal comprising the step of:

the system retrieving application service configuration information that references a software object that includes program instructions directed toward processing the electrical signal (message parser, which retrieve relevant information from the electrical signal for the program instruction, refer to Col 5, Lines 55-67);

the system retrieving a first set of software objects in accordance with the application service configuration information (function, refer to Col 6, Lines 15-67 and Col 7, Lines 1-20, and Col 9, Lines 20-50);

a signal database managing communication information (I/O Interpreter 25, Col 7, Lines 30-40) between the hardware subsystem and the self-configuring application services system via a plurality of a communication protocol (refer to Col 12, Lines 10-20) and referencing a second software object (refer to Col 12, Lines 10-30) that corresponds to a manner of processing information associated with an electrical signal and associates an event code with the electrical signal;

the system determining a required communication protocol from a plurality of communication protocols and selecting communication protocol interface configuration information based on said determining (refer to Col 13, Lines 1-10);

the system retrieving the selected communication interface configuration information that corresponds to the hardware subsystem and which associates a second set of software objects with at least one electrical signal (refer to Col 13, Lines 1-10);

the system automatically generating a hardware interface (refer to Col 12, Lines 10-35) for managing communication between a software object and the hardware subsystem in accordance with the communication interface configuration information, the interface including associating an event code with each electrical signal (refer to Col 12, Lines 10-35);

Although Moyne disclosed the invention substantially as claimed, Moyne did not explicitly disclosing regarding a signal database storing interface communication configuration information.

Krovoshein, in an analogous art disclosed a signal database storing interface communication configuration information (refer to Col 10, Lines 25-27, Col 21, Lines 24-61 and Col 22, Lines 20-34).

It would have been obvious for one of ordinary skill in the art to combine the teaching of Moyne with Krovoshein because Krovoshein's teaching of " a signal database storing interface communication configuration information" would improve Moyne's system by it provides the ability to support automatic sensing of devices to the users in the system.

22. Referring to Claim 30, Moyne discloses comprising an object database (database 22, refer to Col 13, Lines 40-50, Col 8, Lines 15-67, and Col 16, Lines 1-15) storing one from the group of the first software object (Entity, Message, refer to Col 15, Lines 65-67) and the second software object (Entity, Invocation, refer to Col 15, Lines 65-67).

23. Referring to Claim 31, Moyne discloses wherein the object database forms a portion of an Object Database Management System (refer to Col 13, Lines 45-55)

24. Referring to Claim 32, Moyne discloses wherein a mapping between a set of electrical signals and a set of event codes for those electrical signals associated with software objects within the first set of software object (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines 55-61, and Col 7, Lines 65-Col 8, Lines 5, and Col 13, Lines 60-67 and Col 14, Lines 1-15: Examiner interprets the first set of the software object is Message entity, refer to Col 15, Lines 65-67)

25. Referring to Claim 33, Moyne discloses: the system managing communication between the hardware subsystem and the self-configuring interface system in accordance with the electrical signals (refer to Col 4, Lines 20-67, Col 5, Lines 1-15, Lines 55-67, and Col 6); and the system managing communication between the interface system and the first set of software objects in accordance with the set of event codes ("Message entity", refer to Col 14, Lines 50-67, Col 15 - 16).

26. Referring to Claim 34, Moyne discloses wherein a mapping between a set of electrical signals and a set of event codes for those electrical signals associated with software objects within the second set of software object (refer to Col 5, Lines 54-Col 6, Lines 15, Col 6, Lines

55-61, and Col 7, Lines 65-Col 8, Lines 5, and Col 13, Lines 60-67 and Col 14, Lines 1-15: refer to Col 15, Lines 65-67).

27. Referring to Claim 35, Moyne discloses: the system managing communication between the hardware subsystem and the interface system in accordance with the set of electrical signal (refer to Col 4, Lines 20-67, Col 5, Lines 1-15, Lines 55-67, and Col 6); and
The system managing communication between the self-configuring interface system and the first set of software objects and the second set of software objects in accordance with the set of event codes (event codes, as the routine codes, retrieve the routine codes based on the entities within the messages, which are the sets of the software objects, the refer to Col 15, Col 16, Col 17, and Col 18).

28. Referring to Claim 36, Moyne discloses the system executing program instruction associated with the first set of software objects within a first computer system (parent unit, refer to Col 5, Lines 1-15, and Col 3, Lines 1-15, Col 5); and the system executing program instructions associated with the second set of software objects within a second computer system (the message is associated with the program instruction, which also influence the child unit/second computer setting, refer to Col 5 and Col 6).

29. Referring to Claim 37. Moyne discloses the second computer system (children unit, refer to Col 4, Lines 50-67, and Col 5, Lines 1-15) includes the hardware interface module.

Conclusion

Examiner's Notes: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner. In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karen C. Tang whose telephone number is (571)272-3116. The examiner can normally be reached on M-Thr 8 - 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on (571)272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Karen C Tang/
Primary Examiner, Art Unit 2451